

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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**ZOHO CORPORATION and  
ZOHO CORPORATION PVT., LTD.**  
Petitioners,

v.

**MEETRIX IP, LLC,**  
Patent Owner.

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Case IPR2023-00377  
U.S. Patent No. 9,253,332

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**PETITIONERS' REPLY TO PATENT OWNER RESPONSE**

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| <b>Ex.</b> | <b>Description</b>                                                                                                                                                                |
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| 1001       | U.S. Patent No. 8,339,997 (“the ’997 patent”)                                                                                                                                     |
| 1002       | Patent Assignments for the ’997 patent                                                                                                                                            |
| 1003       | Declaration of Dr. Henry H. Houh                                                                                                                                                  |
| 1004       | <i>Curriculum Vitae</i> for Dr. Henry H. Houh                                                                                                                                     |
| 1005       | File History of Application No. 12/646,892 (the ’892 application)                                                                                                                 |
| 1006       | U.S. Patent No. 7,180,997 (“Knappe”)                                                                                                                                              |
| 1007       | U.S. Patent No. 6,690,654 (“Elliott”)                                                                                                                                             |
| 1008       | U.S. Patent No. 7,089,285 (“Drell”)                                                                                                                                               |
| 1009       | U.S. Patent No. 6,701,437 (“Hoke”)                                                                                                                                                |
| 1010       | Guichard <i>et al.</i> , “MPLS and VPN Architectures, A practical guide to understanding, designing and deploying MPLS and MPLS-enabled VPNs,” Cisco Press, 2001 (“VPN Textbook”) |
| 1011       | Declaration of Ingrid Hsieh-Yee, Ph.D., under 37 C.F.R. § 1.68                                                                                                                    |
| 1012       | U.S. Patent No. 3,060,265                                                                                                                                                         |
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| 1017       | T.120 Standard (1996)                                                                                                                                                             |
| 1018       | U.S. Patent No. 6,237,025                                                                                                                                                         |
| 1019       | U.S. Patent No. 6,782,413                                                                                                                                                         |

| Ex.  | Description                                                                                                                                              |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1020 | U.S. Patent No. 6,980,526                                                                                                                                |
| 1021 | Caputo, “Cisco Packetized Voice & Data Integration,” McGraw-Hill, 2000                                                                                   |
| 1022 | de Moraes <i>et al.</i> , “The Internet Multicast from ITS: How it was Done and Implications for the Future,” IEEE Communications Magazine, January 1995 |
| 1023 | U.S. Patent Publication No. 2004/0261116 A1                                                                                                              |
| 1024 | U.S. Patent No. 6,850,496                                                                                                                                |
| 1025 | U.S. Patent No. 6,553,515                                                                                                                                |
| 1026 | U.S. Patent No. 6,633,848                                                                                                                                |
| 1027 | Computer Desktop Encyclopedia (Freedman)                                                                                                                 |
| 1028 | RFC 760                                                                                                                                                  |
| 1029 | RFC 791                                                                                                                                                  |
| 1030 | RFC 1112                                                                                                                                                 |
| 1031 | RFC 2401                                                                                                                                                 |
| 1032 | RFC 2406                                                                                                                                                 |
| 1033 | H.323 Standard                                                                                                                                           |
| 1034 | U.S. Patent No. 7,281,058 (“Shepherd”)                                                                                                                   |
| 1035 | U.S. Provisional Patent Application No. 60/453,307                                                                                                       |
| 1036 | U.S. Patent No. 7,664,056                                                                                                                                |
| 1037 | Declaration of C.J. Alice Chuang                                                                                                                         |
| 1038 | Declaration of Caroline Chang                                                                                                                            |
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## **I. INTRODUCTION**

The Patent Owner Response (“POR”) fails to rebut the Petition or the Board’s preliminary findings that the challenged claims are unpatentable. Instead, the POR provides unsupported and conclusory attorney argument that fails to follow the legally appropriate approach to rebut the obviousness evidence presented in the Petition. The POR attempts to rebut obviousness by challenging prior art references individually instead of the presented combination, mischaracterizing the teachings of the prior art, while lacking support from or citations to the record.

To begin, Petitioners address two irrelevant disputes raised in the POR. First, Patent Owner disagrees with the level of ordinary skill in the art proposed by Petitioners, which requires three years of experience relating to conferencing systems in packet-based networks, “because it is too specialized.” POR at 10. Instead, the Patent Owner proposes that a person of ordinary skill in the art (“POSITA”) would have no relevant experience in the field of the alleged invention but rather generically in “computer systems development.” *Id.* The ’332 patent specifically notes that the invention “relates to computer system architectures, and more particularly to audio and video telecommunications for collaboration over hybrid networks.” Ex\_1001, 1:16-18. Not only is Patent Owner’s proposal clearly wrong but this alleged dispute is actually irrelevant since

none of Patent Owner's rest on this alleged difference. Having a few years of work experience in the actual field of the invention is not "too specialized" a requirement, but under either definition the challenged claims are unpatentable.

Second, Patent Owner disagrees with Petitioners' assertion that "no claim term requires express construction for the Board to evaluate the patentability of the claims." POR at 12. The POR then proceeds to list a District Court's construction of 13 claim terms issued in a litigation with another party. *Id.* However, only a handful of the listed terms appears in the claims of the '332 patent. Moreover, the subsequent Patent Owner arguments do not rely on any of these claim constructions. Thus, this disagreement is also irrelevant. The application of the prior art references in the Petition to the claim language of the challenged claims does not require any of these constructions nor is it at odds with them. Under the plain and ordinary meaning of the claim terms, the challenged claims are unpatentable.

## **II. RESPONSE TO PATENT OWNER ARGUMENTS**

In response to the Petitioners' grounds of rejection and the Board's institution decision, the POR presents unsupported attorney argument with few citations to the record and virtually no support from the inventor declaration. But it is well established that "[a]rgument in the brief does not take the place of evidence in the record." *In re Schulze*, 346 F.2d 600, 602 (CCPA 1965). Further,

the attorney argument challenging obviousness is largely based on improperly “attacking references individually where the rejection is based upon the teachings of a combination of references.” *In re Merck & Co., Inc.*, 800 F. 2d 1091, 1097 (Fed. Cir. 1986). Thus, the Patent Owner’s arguments fail to overcome the Board’s findings that claims 1-12 are unpatentable.

**A. The USPTO Has Not Determined that VPN Textbook (Ex\_1010) Is Not Invalidating Prior Art**

The POR asserts that because the applicant cited three Cisco Systems, Inc. publications during prosecution, somehow Ex\_1010, a book published by “Cisco Press” cannot be used to invalidate the claims. Patent Owner alleges that Petitioners used the VPN Textbook “like a catalog of electronic components, to recreate the invention.” POR at 14. First, the POR provides no legal basis for the proposition that just because a prior art reference was disclosed during prosecution from a given publisher, all references from that publisher have somehow been considered and can no longer be used as invalidating prior art. This is clearly wrong. *See e.g., Hum Industrial Technology, Inc. v. Amsted Rail Company, Inc.*, IPR2023-00539, Paper no. 10 at 48-53 (PTAB 2023) (declining to exercise discretion under §325(d) even where the primary references were “cited on the patents’ corresponding Information Disclosure Sheets.”)

Second, this argument is improperly premised on the alleged use of the VPN Textbook as a “catalog of components” to recreate the alleged invention. It is not.

Contrary to Patent Owner's allegations, "the principal references" do disclose the implementation of a virtual private network as the type of network used in a video conferencing system. *See e.g.*, Ex\_1006, 4:58-61; Ex\_1007, 4:20-31, 6:55-57.

The VPN Textbook is used in combination with these references in each of the three grounds to show that the alleged invention is no more than "a combination of familiar elements according to known methods ... [that] does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 401 (2007). As the Board noted, the VPN Textbook establishes that the "hub-and-spoke" topology relied upon in the '332 Patent for the claimed virtual private network was "the most common" known method. Institution Decision at 23. Thus, contrary to Patent Owner's assertion, the VPN Textbook is appropriately relied upon in the Petition's Grounds in combination with other references to establish obviousness of the challenged claims.

**B. Ground 1: Claims 1-2, 4-5 and 7 Are Obvious Over Knappe in View of Elliott and the VPN Textbook**

With respect to Ground 1, Patent Owner raises three arguments regarding claim 1 (and no arguments regarding any other claims): 1) the "prior art ... does not teach or disclose the differentiated mixed audio streams of the instituted claims"; 2) it would not be obvious to combine the VPN tunneling of Elliot with Knappe's multiparty conferencing system; and 3) the prior of record do not

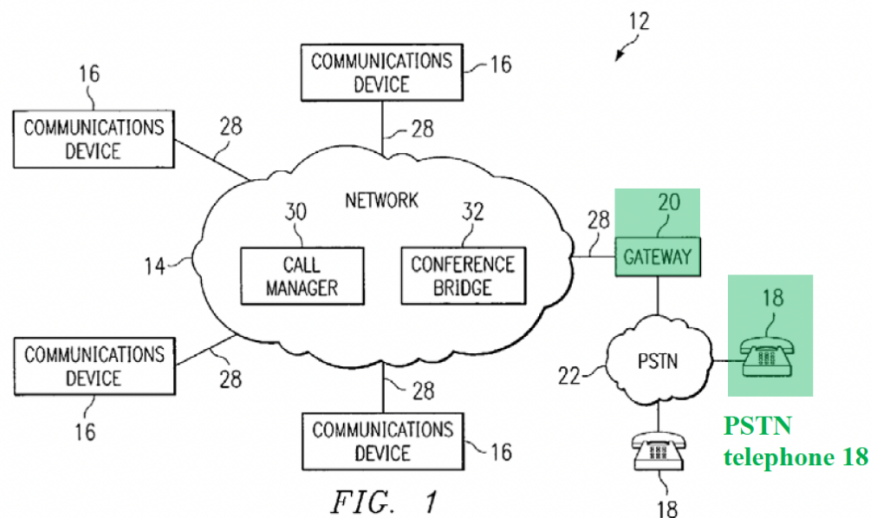
disclose the “VPN tunnel” limitations. These arguments, each meritless, are addressed in the order raised.

1. Patent Owner’s Argument Regarding “Differentiated Mixed Audio Streams” Is Inapposite and Inaccurate

Patent Owner’s assertion in section A of the POR that the references relied on in the Petition fail to disclose “mixing of different audio streams comprising different input signals for different recipients” is irrelevant and inaccurate. POR at 16-18<sup>1</sup>. The claims of the ’332 patent do not require mixing of “audio streams.” In fact, there is no ’332 patent claims that requires any “audio stream.” To the extent Meetrix is referring to the requirement that “audio data” from a “PSTN client” is mixed with “audio data” from a “moderator” [limitations 1.4 and 8.1.1] and then sent to a separate “remote client” [limitations 1.5 and 8.2], the references in the Petition expressly disclose such limitations. For example, Knappe teaches receiving “the first audio data from the PSTN client” and “the second audio data from the moderator.” Ex\_1003 ¶¶166-179. Specifically, Knappe describes and shows in Figure 1 of Knappe that audio signals from PSTN telephone 18 are sent to gateway 20, which communicates corresponding audio data to conference bridge 32, which facilitates the multiparty communications:

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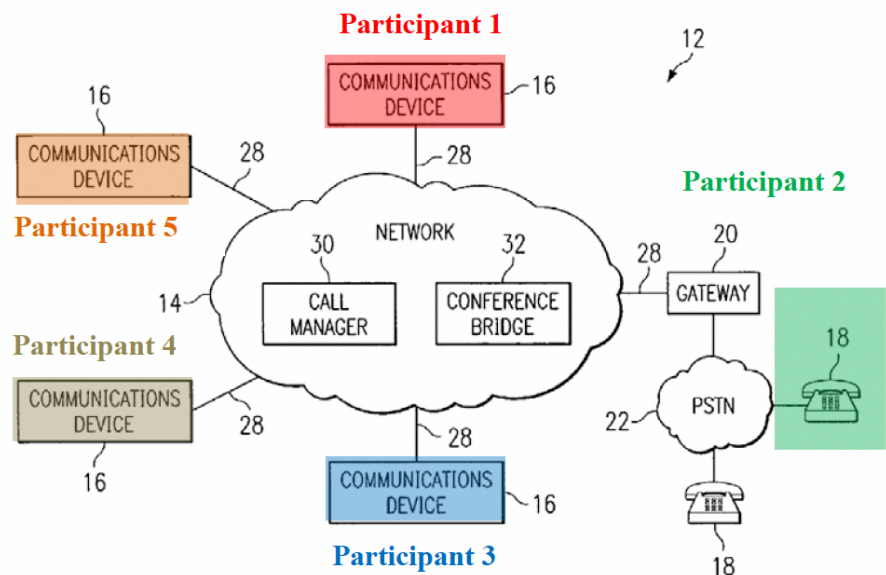
<sup>1</sup> Section A of the POR is not expressly directed to either Ground in the Petition. The responsive arguments herein are applicable to all claims in the ’332 patent and all Grounds in the Petition.



Ex\_1006 FIG. 1(annotated); *see also id.*, 4:18-20, 5:23-26; *see also id.*, 4:58-5:1 (“conference bridge 32 provides conference call and other suitable audio, video, and/or real-time multiparty communication sessions between communication devices 16. A Multiparty communication session includes three or more parties exchanging audio and/or other suitable information.”); Ex\_1003 ¶¶168-169.

Knappe further teaches that “at least one participant may be given the priority of moderator for a particular conference call.” *Id.*, 8:52-56, 7:12-15; Ex\_1003, ¶175. Thus, a POSITA reading Knappe would understand that one of Knappe’s communications devices 16 may be designated a moderator. Ex\_1003 ¶175.

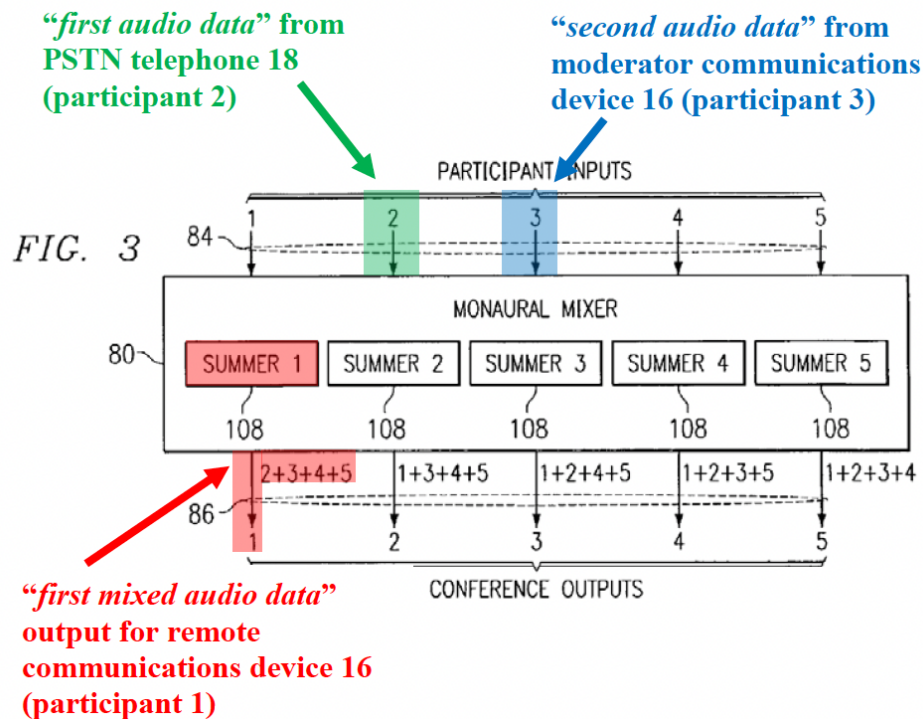
The below annotated Figure 1 from Knappe depicts an example where the moderator is participant 3 in the Knappe system:



Ex\_1006, FIG. 1 (annotated); Ex\_1003 ¶176. Knappe teaches that the “input buffers receive and buffer packets of input audio streams from participants for processing by conference bridge 32,” which would include audio data from participant 3 (the moderator). Ex\_1006, 6:3-6; Ex\_1003 ¶177. Thus, Knappe discloses receiving audio data from a moderator. Ex\_1003 ¶¶176-179.

Knappe also teaches that mixers 58, 80, and 100, of conference bridge 32 mix the audio data received from PSTN telephone 18 with audio data received from a moderator’s communications device 16 into “a first mixed audio data.” *See id.* ¶196. For example, Knappe explains that “monaural mixer 80 receives participant input streams 84 and combines the streams in summers 82 to generate conference output streams 86 for each participant.” Ex\_1006, 6:59-67; Ex\_1003 ¶197. As a result, “the conference output stream of participant 1 includes the audio inputs of participants 2-5 ... the conference output stream of participant 2 includes

the audio inputs of participants 1 and 3-5,” and so on. Ex\_1006, 7:1-11; Ex\_1003 ¶197. A POSITA would have understood Knappe to disclose the “mixing the first audio data from the PSTN client with the second audio data from the moderator into a first mixed audio data,” and transmitting that “first mixed audio” to remote client (participant 1) as shown in an exemplary implementation in the below annotated Figure 3:



Ex\_1006, FIG. 3 (annotated); Ex\_1003 ¶198. Therefore, Knappe teaches mixing audio data from different clients with audio data from a moderator and sending the mixed data to a separate remote clients. Ex\_1003 ¶¶166-199. Each remote client receives different mixed audio data. Ex\_1006, 7:1-11; Ex\_1003 ¶197.

2. Patent Owner's Assertion That There is No Motivation to Combine Knappe with Elliot is Legally and Factual Inaccurate

In section B of POR<sup>2</sup> the Patent Owner asserts that the VPN tunnel limitations of the independent claims [limitations 1.3.2, 1.5, 8.2 and 8.5] are not obvious because a POSITA would not be motivated to combine Elliot's VPN tunnelling with Knappe's multiparty conferencing system. To support this position, Patent Owner argues that these references would not be combined by a POSITA because Elliot and Knappe are directed "different problem[s]." POR at 19-20. Patent Owner's assertion fails for several reasons.

First, the POR is incorrect in its description of Elliott's teachings. Elliott does not pertain solely to isolated one-to-one interactions. Elliott explicitly states that its system "also enables services for one-to-many and many-to-many IP-based collaboration[.]" Ex\_1007, 2:10-13; *see also id.*, 7:58-61 ("multiple 1:1, 1:n, n:1, and n:n sessions"). Thus, the POR is based on a false premise.

Second, Patent Owner misapprehends Petitioners' argument and the actual prior art combination relied on for the VPN tunneling limitations. Petitioners rely on Knappe in combination with Elliot and *the VPN Textbook* as viewed by one skilled in the art. But Patent Owner's arguments fail to address anything other than Knappe and Elliot. This alone is improper. *See In re Merck*, 800 F.2d at 1097

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<sup>2</sup> In section D of the POR the Patent Owner asserts the same argument (verbatim) under a different heading. POR at 26-27

(“The test is whether the references, *taken as a whole*, would have suggested the invention to one of ordinary skill.”).

Moreover, Petitioners’ argument regarding the VPN tunneling element is that a POSITA would have been motivated to utilize VPN tunneling in Knappe’s conferencing system because VPN tunneling was a known common technique for providing secure communications with predictable results. Specifically, Knappe’s communications system transmits “audio, video, voice, data and other suitable types of... traffic between source and destination endpoints” across “network 14 [which] is the Internet.” Ex\_1006, 3:26-58. It was known that data transmitted over public IP networks is vulnerable to eavesdropping and other problems since the transmission is not secure. The VPN Textbook explains that “more and more business-to-business traffic takes place over the Internet” and that this type of communication is “riddled with security issues.” Ex\_1003 ¶146; Ex\_1010, 119. VPNs and VPN tunneling were a known solution for securing communications over public networks. Ex\_1003 ¶147; Ex\_1010, 115 (“A Virtual Private Network (VPN) ... [provides] connectivity amongst multiple sites ... with the same access or security policies as a private network.”). Thus, it would have been obvious to a POSITA to use VPNs and VPN tunneling with Knappe’s multiparty conferencing to secure communications over the Internet. Ex\_1003 ¶148.

The obviousness of adding a VPN tunneling feature to Knappe's system is further demonstrated by the work of others making similar feature combinations. Ex\_1003 ¶149; *see, e.g.*, Ex\_1020, 2:65-3:3, 5:52-55 (disclosing "need for a videoconferencing system ... for delivering secure ... services over an IP network" by using a "VPN ... over public networks ... which is encrypted to make it secure from outside access and interference"); Ex\_1019, 2:66-3:1, 4:23-27, 6:36-41 (describing a "conference bridge application" that transmits data "over public networks, using technologies such as ... [a] Virtual Private Network (VPN)"). Therefore, a POSITA would have found it obvious to combine Knappe's conferencing system with the VPN technology described in Elliott and the VPN Textbook. Ex\_1003 ¶¶150-153, 155-162; Ex\_1023 ¶¶[1412], [1452]-[1453] (describing "VPN connectivity," including "hub-and-spoke or mixed topologies" in the context of "services [that] include Internet Access, ... chat and Videoconferencing etc.").

Consistent with well-known approaches, Elliott teaches utilizing a "virtual private network (VPN)... which uses IP or IP-tunneling" to transmit "voice, fax, data, video" and "[o]ther types of collaboration... data." Ex\_1007, 2:66-3:1, 4:29-34, 6:53-54; Ex\_1003 ¶151. In view of Elliott's VPN and VPN Textbook's teachings, it would have been obvious to a POSITA to utilize VPN tunneling when communicating audio, video, and collaboration data across Knappe's Internet

network 14 because VPN tunneling would make the transmitted data secure from outside access and interference. Ex\_1003 ¶151; *see* Ex\_1020, 5:52-55 (“VPN refers to a network that is carried over public networks, but which is encrypted to make it secure from outside access and interference.”). Additionally, a POSITA would have understood that VPNs are beneficial because they reduce the need to lease private data lines, which reduces or avoids the costs for implementing a private network by communicating securely over the Internet. *See, e.g.*, Ex\_1026, 44:10-12 (“[O]ffices [] create virtual private networks (VPNs) to save money on remote access and interoffice connectivity.”).

Moreover, the results would have been predictable and there would have been a reasonable expectation of success in the combination given that Knappe and Elliott describe similar conferencing systems. *See, e.g.*, Ex\_1006, Abstract, 3:26-29, Fig. 1; Ex\_1007, Abstract, Fig. 1. This is especially so since VPN tunneling was conventional. *See, e.g.*, Ex\_1019, 4:23-27, 6:36-41; Ex\_1007, 5:49-56. Dr. Houh explains that he “personally [before the earliest claimed priority date of the ’332 Patent] configured, deployed and utilized VPN technology for carrying VoIP traffic using the NBX 100 system, which was also capable of performing conference calls.” Ex\_1003, ¶140. Any modification needed to Knappe, to accommodate the teachings of Elliott, would have been within the level of ordinary skill in the art. Ex. 1003, ¶152. As Dr. Houh explains, “the combination of

Knappe and Elliott is merely the ordinary use of the common technique of VPN tunneling of conferencing data, as disclosed in Elliott, in the similar conferencing system of Knappe to yield predictable results.” *Id.* Thus, there is a motivation to combine. *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380 (Fed. Cir. 2023) (“If there’s a known technique to address a known problem using ‘prior art elements according to their established functions,’ then there is a motivation to combine”).

Third, to the extent Patent Owner is asserting Elliot would not be combined with Knappe because they are not analogous, Patent Owner is wrong. As explained above, like the ’332 patent, both Elliot and Knappe disclose conferencing systems wherein computer and PSTN telephone conference participants are supported. Ex\_1003 ¶137; *see e.g.*, Ex\_1006, Abstract, 3:26-29; Ex\_1007, Abstract; *see also*, Ex\_1006, 3:41-49, FIG. 1; Ex\_1007, 5:35-39, 6:1-11, 8:16-39, FIG. 1. Minor variations in focus and structure do not render these references not analogous. *See Unwired Planet, LLC v. Google, Inc.*, 841 F.3d 995, 1001 (Fed. Cir. 2016) (holding that two different types of search menus were analogous because “[t]he field of endeavor of a patent is not limited to the specific point of novelty, the narrowest possible conception of the field, or the particular focus within a given field”); *see also*, *KSR*, 550 U.S. at 417 (“if a technique has been used to improve one device, and a person of ordinary skill in the art would

recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”).

Fourth, Patent Owner’s assertion that nothing in Elliot “would suggest to a person or [sic] ordinary skill in the art that VPN tunnel should or could be implemented to protect voice over the Elliot POTS phone connection or access to a publicly-available URL on the Web” is irrelevant. POR at 20. There is no such requirement in any of the ’332 patent claims.

3. The Prior Art of Record Does Disclose “VPN Tunnel” Limitations

In section C of the POR<sup>3</sup>, Patent Owner asserts a series of irrelevant, incorrect and disjointed arguments (most of which are not supported by any evidence in the record) to assert the prior art does not disclose the “VPN tunnel” limitations of claim 1 (limitations 1.3.2 and 1.5). POR at 21-25.

Patent Owner first contends, “Petitioner has broken the complete claim element into two parts. The element is ‘receiving first audio data, first video data and first collaboration data at a server from a first remote client through a first Virtual Private Network (VPN) tunnel.’” POR at 21-22. But there is no such claim limitation in the ’332 patent. The closest limitations are 1.3.1 and 1.3.2 which together recite “receiving ~~third~~ first audio data, ~~first~~-video data and ~~first~~

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<sup>3</sup> In section E of the POR the Patent Owner asserts the same argument (nearly verbatim) under a different heading. POR at 29-34

collaboration data ~~at a server~~ from a ~~first~~ at least one remote client through a first Virtual Private Network (VPN) tunnel.” Ex\_1001, 9:57-59 [reflecting differences between actual claim language and the language that Patent Owner contends is the element]. Nonetheless, for the remaining arguments, Petitioners will assume Patent Owner’s inaccurate assertion regarding the claim language is a typographical error, and Patent Owner meant to contend that the Petitioners have not shown the prior art of record discloses limitations 1.3.1 and 1.3.2 (and potentially limitation 1.5 which also refers to a VPN tunnel).

Patent Owner next argues because Knappe “does not disclose communication using VPN tunnel” Petitioners have “combined Elliot (Ex\_1007) with Knappe or Drell.” POR at 22. But Petitioners do not rely on Drell at all – instead, Petitioners rely on Knappe in combination with Elliot and the VPN Textbook to show that a POSITA would be motivated to and know how to implement well known VPN tunneling techniques within Knappe’s conferencing system. Patent Owner does not address this combination. Instead, Patent Owner again argues that nothing in Elliot “would suggest to a person or [sic] ordinary skill in the art that VPN tunnel should or could be implemented to protect voice over the Elliot POTS phone connection or access to a publicly-available URL on the Web.” POR at 22. Again, there is no such requirement in any of the ’332 patent claims.

Next, Patent Owner again asserts (verbatim as it did in section B of the POR) that due to differences between the conference systems in Elliot and Knappe, a POSITA would not be motivated to combine Elliot and Knappe. POR at 22-23. But as explained above Petitioners have shown that a POSITA would be motivated and able to combine conventional VPN tunnel technology with Knappe's conferencing system as evidenced by the disclosures in the VPN Textbook, Elliot and the knowledge of POSITA. Supra Section II.B.2.

Next, Patent Owner argues (with no evidentiary support), that the VPN and VPN tunnel referenced in Elliot "can only be understood as directed to 'network 18,' which is used to connect two computers over the Internet, and not audio data, mixed or otherwise." POR at 23-24. Patent Owner's attorney argument carries no evidentiary weight. *In re Schulze*, 346 F.2d at 602. Additionally, it's wrong. Elliot expressly discloses securing the transmission of audio data with VPN tunnels. Elliot discloses a conferencing system that allows for multi-media collaboration between multiple remote participants, including Internet-based and PSTN clients. Ex\_1007, Abstract, FIG. 1; Ex\_1003 ¶127. Elliott teaches "collaborative Web browsing, audio conferencing, video conferencing, and application sharing." Ex\_1007, 1:40-44; Ex\_1003 ¶128. Elliott further teaches the use of "a virtual private network (VPN) ... which uses IP or IP-tunneling" for the

transmission of “voice, fax, data, video” and “[o]ther types of collaboration ... data” during the conference. Ex\_1007, 2:66-3:1, 4:29-34, 6:53-54; Ex\_1003 ¶129.

Figure 1 of Elliott shows a “session server 12 [that] is a conference server that follows the ITU T.120 standard” which “contains a series of communication and application protocols and services that provide support for real-time, multi-point data communications.” Ex\_1007, FIG. 1, 5:49-54.

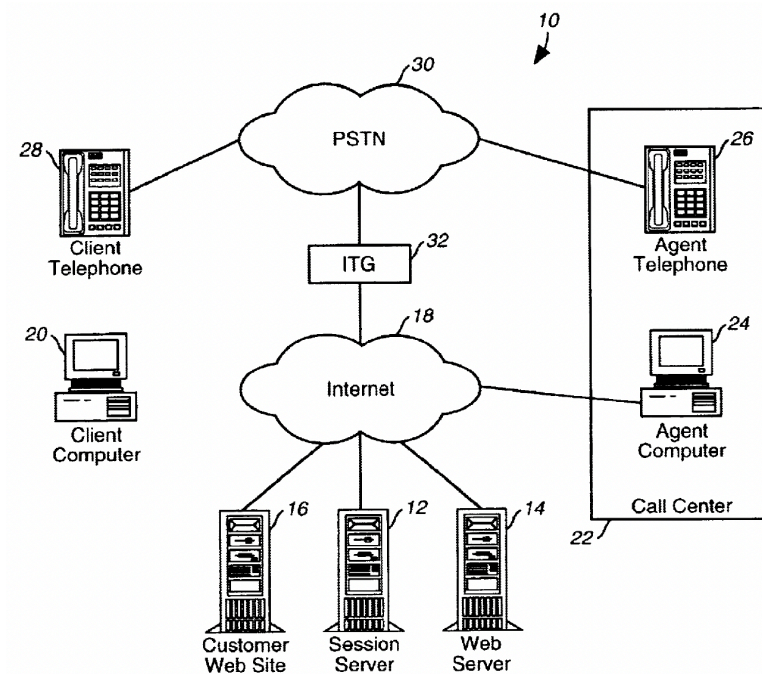


**FIG. 1**

*Id.*, FIG. 1; Ex\_1003 ¶130. “[N]etwork 18 can be either a public or a carrier supported virtual private network (VPN) or local area network (LAN) which uses IP or IP-tunneling. Ex\_1007, 4:28-32; Ex\_1003 ¶131. This network allows for secure transmission of audio data via a VPN tunnel. Ex\_1003 ¶ 151.

With respect to transmission of mixed audio data via a VPN tunnel, Knappe discloses transmission of the claimed mixed audio data (*see e.g.* Petition at 39-40

re limitation 1.4) and it would have been obvious to utilize conventional VPN tunnels within Knappe's conference system for transmission of mixed audio data as recited in limitation 1.5. *See e.g.*, Petition at 40-41.

Next, Patent Owner argues that the VPN tunnel limitations of claim 1 are not obvious because Elliot does not disclose a system wherein data is delivered via a VPN tunnel to a moderator where the data is "decrypted" before being shared with the PSTN client. POR at 24. But claim 1 of the '332 patent does not contain any such requirements.

Next, Patent Owner asserts (without any evidentiary support) the VPN tunnel limitations of claim 1 are not obvious because none of the prior discloses use of a "VPN bridge." POR at 24. But no claim of the '332 patent requires a VPN bridge. Patent Owner again argues that Elliot does not support a finding of obviousness because Elliot's reference to a VPN is "unrelated to audio communication." As explained above, Elliot expressly discloses communication of audio data via a VPN.

Finally, Patent Owner argues that the prior art of record does not disclose a VPN tunnel as construed ("a private network of securely connected appliances configured within a public network"). POR at 24-25. But as explained above Elliot expressly discloses a VPN tunnel. Ex\_1007, 4:28-32; Ex\_1003 ¶131 ("[N]etwork 18 can be either a public or a carrier supported virtual private network

(VPN) or local area network (LAN) which uses IP or IP-tunneling.”). Moreover, Dr. Houh explained that before the ’332 patent’s priority date, it was well known to implement VPN tunnels. Ex\_ 1003 ¶¶96. He explained that “[t]unneling refers to a networking technique whereby a packet is encapsulated in another network packet, typically so that it can traverse an underlying network that does not support the capability required by the encapsulated packet.” Ex\_1003 ¶¶88. He explained that such encapsulated IP tunneling was standardized and “described in RFC 1853 which was published in the mid-1990s.” *Id.* He further explained encapsulated packet tunneling was implemented and standard in both MBone and IPsec – both of which were common network security approaches in the 1990’s. Ex\_1003, ¶¶89-95. A POSITA, with knowledge of these standard tunneling approaches, would have known to implement VPN tunneling disclosed in Elliot in Knappe’s conferencing system. Ex\_1003, ¶¶151-162, 189-194, 200-202.

**C. Ground 2: Claims 3, 6, and 8-11 Are Obvious Over Knappe in View Elliott, the VPN Textbook, and Drell**

In response to Ground 2, Patent Owner makes arguments only with regard to independent claim 8 and dependent claim 6. Most of the arguments repeat verbatim arguments made in section B and C of POR. In section D of the POR (pp. 26-27), Patent Owner again argues (verbatim as argued in section B of the POR) that a POSITA would not be motivated to combine Elliot with Knappe. As explained above, Patent Owner’s argument is legally and factually flawed. *Supra*

Section II.B.2. In section E of the POR (pp. 28-34), Patent Owner also repeats its arguments from section C of the POR, asserting that the “VPN tunnel” limitations of claim 8 are not disclosed in the prior art. To the extent arguments vary for claim 8, the arguments are responded to below. Finally, Patent Owner argues that “encoding” requirement of dependent claim 6 is not disclosed in the prior art of record because a POSITA would not have been motivated to combine Drell and Knappe. This argument is addressed below as well.

1. The Prior Art of Record Does Disclose the “Through A First Virtual Private Network (VPN) Tunnel” Limitation of Claim 8

In section E of the POR, Patent Owner again contends, “Petitioner has broken the complete claim element into two parts. The element is ‘receiving first audio data, first video data and first collaboration data at a server from a first remote client through a first Virtual Private Network (VPN) tunnel.’” POR at 29. But there is no such claim limitation in claim 8 of the ’332 patent. Given that the heading refers to “through a first private network (VPN) tunnel” limitation of claim 8 (limitation 8.2), Petitioners will assume Patent Owner’s inaccurate assertion regarding the claim language is some a typographical error, and Patent Owner meant to contend that the Petitioners have not shown the prior art of record discloses limitation 8.2.

Next, Patent Owner again asserts (verbatim as it did in sections B and C of the POR) that due to differences between the conference systems in Elliot and

Knappe, a POSITA would not be motivated to combine Elliot and Knappe. POR at 30-31. But as explained above Petitioner has shown that a POSITA would be motivated and able to combine conventional VPN tunnel technology with Knappe's conferencing system as evidenced by the disclosures in the VPN Textbook, Elliot and the knowledge of POSITA. Supra Sections II.B.2-3.

Next, Patent Owner again argues that nothing in Elliot "would suggest to a person or [sic] ordinary skill in the art that VPN tunnel should or could be implemented to protect voice over the Elliot POTS phone connection or access to a publicly-available URL on the Web." POR at 30. Again, there is no such requirement in any of the '332 patent claims.

Next, Patent Owner again argues that the VPN and VPN tunnel referenced in Elliot "can only be understood as directed to 'network 18,' which is used to connect two computers over the Internet, and not audio data, mixed or otherwise." POR at 23-24. This argument fails for the same reasons discussed above. *See supra*, Sections II.B.2-3.

Next, Patent Owner argues that the VPN tunnel limitations of claim 8 are not obvious because Elliot does not disclose a system wherein data is delivered via a VPN tunnel to a moderator where the data is "decrypted" before being shared with the PSTN client. POR at 31. But claim 8 of the '332 patent does not include such requirements. Next, Patent Owner again asserts (without any evidentiary support)

the VPN tunnel limitations of claim 8 are not obvious because none of the prior art discloses use of a “VPN bridge.” POR at 32. Again, no claim of the ’332 patent requires a VPN bridge.

Next, Patent Owner makes the same arguments it made in Section C of the POR about the distinction between VPNs and VPN tunnels and argues that the prior art of record disclose neither as working with mixed audio data as claimed. POR at 32-33. As explained above, as evidenced by Elliot, the VPN Textbook and the declaration of Dr. Houh, VPNs and VPN tunnels were conventional by the ’332 patent’s priority date, and a POSITA would have been motivated to and known how to add VPN tunnels to the conferencing systems in Knappe and Drell. *See supra* Section II.B.2-3; *see also* Petition at 60-71; Ex\_1003 ¶¶286-321.

Patent Owner also makes arguments about claims 19 and 23. POR at 33. But the ’332 patent does not have any such claims.

2. A POSITA Would Have Been Motivated to Combine Drell’s Codec that Compresses Mixed Audio Before Transmission in Knappe’s Conferencing System

In section F of the POR, Patent Owner asserts without any evidentiary support that a POSITA would not have been motivated combine Drell’s compression scheme with Knappe’s conferencing system. POR at 34-35. As a preliminary matter, Patent Owner’s assertion here is nothing more than attorney argument and carries no evidentiary weight as to what a POSITA would

understand regarding combining Drell and Knappe. *In re Schulze*, 346 F.2d at 602. In addition, Patent Owner's assertion is incorrect. The only evidence in the record establishes that a POSITA would have been motivated to combine the teachings of Knappe and Drell to produce the obvious, beneficial, and predictable results of having a user act as moderator as in the Knappe system and implementing various aspects of Knappe's conferencing system as software and with an audio codec using a compression algorithm to reduce the amount of data being transmitted. Ex\_1003 ¶254. Knappe and Drell are analogous prior art both pertaining to the same field of multiparty conferencing between Internet-based and PSTN users. *Id.* ¶255.

A POSITA understood that it was routine and would have recognized it is desirable to have a person (e.g. a leader or a moderator) to control the conference. *Id.* ¶255. Indeed, Knappe teaches that at least "one participant may be given the priority of moderator for a particular conference call" to "control the flow and/or organization of the conference." Ex. 1006, 8:52-56; 1:53-55; Ex\_1003 ¶255. This would be desirable because frequently in business conferencing, at the time and even now, one person is in charge of the conference. Ex\_1003 ¶255. Consistent with this understanding, Knappe teaches that at least "one participant may be given the priority of moderator for a particular conference call" to "control the flow and/or organization of the conference." Ex\_1006, 8:52-56; 1:53-55.

Knappe also teaches that its “call manager 30 and conference bridge 32” may “have their have their functionality distributed across and/or at the periphery of the network 14.” *Id.*, 4:31-33. Drell further teaches a “MP conferencing application” that performs functions similar to Knappe’s call manager 30 and conference bridge 32 implemented as software at a conference endpoint. Ex\_1008, 1:65-2:6, 6:63-66 (“The present invention advantageously utilizes software-based processing of video and audio data streams to implement a multi-point conferencing capability in a conference endpoint.”). Thus, it would have been obvious to a POSITA that the moderator communications device 16 of Knappe could implement the call manager and conference bridge 32 functionality (like Drell’s MP conferencing application) as software at the moderator. Ex\_1003 ¶256.

A POSITA also would have been motivated to implement Drell’s “[a]udio codec” capable of encoding/decoding “in accordance with a standard ... or proprietary audio compression algorithm” and “video codec 406” capable of encoding/decoding “in accordance with a standard ... or proprietary video compression algorithm” with Knappe’s “communication devices 16 compris[ing] ... [a] codec (coder/decoder).” Ex\_1008, 6:18-45; Ex\_1006, 4:5-11; Ex\_1003 ¶258. This would have the benefit of reducing the amount of data transmitted over Knappe’s network 14. Ex\_1003 ¶258. The beneficial results would have been predictable and a POSITA would have had a reasonable expectation of success

given Knappe's mention of a codec and Drell's discussion of codecs for encoding, decoding, and compressing in the audio and video conferencing context. *Id.*

¶¶259-260.

The combination of Knappe and Drell is merely the ordinary use of a common technique (implementing conference bridging and moderator functionality in software) in the system of Knappe where a participant is designated as moderator to yield predictable results of initiating, organizing, controlling the conference through software at a conference endpoint and reducing the cost of having a separate conference bridge. *Id.* ¶257.

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Given that none of the arguments raised by Patent Owner in the POR successfully rebut any of Petitioners' arguments as any of the '332 patent claims, or the Board's initial determinations as to these claims, all of the challenged claims, should be finally deemed unpatentable.

### **III. CONCLUSION**

For the reasons given above and in the Petition, Petitioners have demonstrated a reasonable likelihood of success in establishing the unpatentability of the challenged claims of the '332 patent and respectfully requests cancellation of such claims.

Respectfully submitted,

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**CERTIFICATE OF WORD COUNT PURSUANT TO 37 C.F.R. § 42.24(D)**

The undersigned hereby certifies that the word count for the above Reply is 5,391, which is less than the 5,600 allowed under 37 CFR § 42.24(c)(1).

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**CERTIFICATE OF SERVICE**

The undersigned certifies that on January 12, 2024, a copy of this PETITIONERS' REPLY TO PATENT OWNER RESPONSE and all supporting exhibits were provided via electronic mail (by consent) to the Patent Owner by serving the correspondence address identified in the Mandatory Notices:

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